

CLAIMS

1. A wear-resistant sliding part comprising:
a first part and a second part that move in linkage with each other; and
5 a wear-resistant member that stands in between contacting portions of the two parts;
wherein said wear-resistant member is inserted in a recess provided in the second part in a state in which it is protected from falling off and it is allowed in the recess to rotate and move in a parallel direction to a bottom surface of
10 the recess;
wherein a bottom surface of the wear-resistant member makes contact with the bottom surface of the recess and the first part makes contact with the top surface of the wear-resistant member, allowing the first and the second parts to move; and
15 wherein a perimeter of the bottom surface of said wear-resistant member has a chamfer that eliminates a sharp edge.
2. The wear-resistant sliding part according to claim 1, wherein the chamfer at the perimeter of the bottom surface of said wear-resistant member is larger than a rounded fillet or a flat fillet of said recess.
20 3. The wear-resistant sliding part according to claim 1 or claim 2, wherein a chamfer is also formed to eliminate a sharp edge at a perimeter of a top surface of said wear-resistant member.
4. A wear-resistant sliding part comprising:

a first part and a second part that move in linkage with each other, and
a wear-resistant member that stands in between contacting portions of the two
parts;

wherein said wear-resistant member is inserted in a recess provided in the
5 second part in a state in which it is protected from falling off from the recess
and it is allowed in the recess to rotate and move in a parallel direction to a
bottom surface of the recess;

wherein a bottom surface of the wear-resistant member makes contact with
the bottom surface of the recess and the first part makes contact with the top
10 surface of the wear-resistant member, allowing the first and the second parts
to move; and

wherein the bottom surface of said wear-resistant member making contact
with an inner radial surface of said recess has a flatness in the range of 0.05 to
20 μm and a convex shape of which outer side is raised up at the perimeter
15 side.

5. The wear-resistant sliding part according to claim 4, wherein the
flatness of the bottom surface of said wear-resistant member is larger than
that of the bottom surface of the recess provided for said second part.

6. A wear-resistant sliding part comprising:

20 a first part and a second part that move in linkage with each other; and
a wear-resistant member that stands in between contacting portions of the two
parts;

wherein said wear-resistant member is inserted in a recess provided in the

second part in a state in which it is protected from falling off from the recess and it is allowed in the recess to rotate and move in a parallel direction to a bottom surface of the recess;

wherein the bottom surface of the wear-resistant member makes contact with the bottom surface of the recess and the first part makes contact with the top surface of the wear-resistant member, allowing the first and the second parts to move; and

wherein at least one of the bottom surface of the wear-resistant member making contact with the bottom surface of said recess, a side surface of the wear-resistant member making contact with an inner radial surface of said recess, and a top surface of the wear-resistant member making contact with said first part has a surface roughness (Ra) of 0.2 μm or less.

7. The wear-resistant sliding part according to any one of claims 1 through 6, wherein the difference between an outer diameter of said wear-resistant member and an inner diameter of said recess is 0.03 mm or more.

8. The wear-resistant sliding part according to any one of claims 1 through 7, wherein said wear-resistant member is made from materials including silicon nitride ceramics.

9. The wear-resistant sliding part according to any one of claims 1 through 8, wherein the two parts moving in linkage with each other are a valve bridge and a rocker arm in a valve train system of a diesel engine, wherein said wear-resistant member is inserted into the recess provided at an upper portion of the valve bridge and a tip of the wear-resistant member is

arranged to make contact with the rocker arm.

10. A sliding mechanism using the sliding part according to any one of claims 1 through 9.